PMBOK® 7e Update for CPM 4e Chapter 8 Scheduling Projects

PMBOK® 7e Domains Impacting Chapter 8

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Team

A project schedule is developed with a collaborative effort from the project team. Individual team members possess knowledge about resources, time required to complete a task, and its interdependencies with other tasks. Every member in the project team must work with other team members in deciding resource allocation, sequencing tasks, and optimizing the project duration. Experience and knowledge about similar projects executed in the past is of immense help. A servant leadership style facilitates development of a more realistic schedule, and teams must be allowed to self-manage for this purpose.

Development Approach

Developing a project schedule differs significantly based on the project type, resource availability, and uncertainties associated with requirements and resources. In the predictive approach, scope can be defined with less ambiguity at the start of the project, and a comprehensive and a more accurate schedule development is feasible through the use of detailed scope planning and WBS creation. In turn, the WBS would also help in determining resources required and costs associated with each activity. However, when uncertainty and risks are associated with defining requirements or volatility exists in requirements, an adaptive (incremental or iterative) development approach is preferred. In this case, the schedule is planned and limited to a single sprint, which attempts to meet one requirement at a time; the team and all available resources will be dedicated to this sprint in order to minimize further uncertainty and waste.

Planning

Deliverables influence schedule, so a predictive planning approach which creates a WBS broken down to the lowest level deliverables could be relatively comprehensive and complete. In adaptive methods, high-level themes or epics are used to develop features which are further decomposed into stories and backlog items. Schedule is developed for each story, one at a time, to reduce waste and eliminate uncertainty. An adaptive approach

uses incremental planning and often use timeboxes for scheduling. Work in each time box is based on a prioritized backlog.

Delivery

The WBS is used in a predictive plan approach to develop a comprehensive schedule, so a realistic timeline for project deliverables can be developed. However, while using an adaptive approach wherein a full-blown schedule is not opted for, a checklist of all the criteria required to be met is developed so that a deliverable can be considered ready for customer use or “definition of done” is fulfilled. In this case requirements are associated with uncertainty. So themes are translated into epics and then features, and each feature will have multiple user stories. A story is a clear and concise representation of a requirement written from the end user’s perspective, and a schedule is developed only at the story level.

Measurement

A project schedule includes milestones along with a timeline and success criteria for project deliverables in a predictive approach. This schedule and timeline are used to measure progress. However, in an adaptive approach, we will have to follow a different measurement of work progress based on a schedule developed for a story and a measurement of promised business value. In this approach, schedules prepared for a sprint are used for measurement of progress.

Uncertainty

An effective schedule is not always possible when uncertainty exists in defining requirements. Ambiguity, volatility, complexity, and risk are some of the factors associated with requirements which may compel the project team to employ an adaptive approach of developing a schedule one story or sprint at a time.